

Remarks

Reconsideration of this Application is respectfully requested.

Upon entry of the foregoing amendment, claims 24-30 are pending in the application, with 24 being the only independent claim. By the foregoing, claims 24, 25 and 27-30 are amended. These changes are believed to introduce no new matter, and their entry is respectfully requested.

Based on the above amendment and the following remarks, Applicants respectfully request that the Examiner reconsider all outstanding objections and rejections and that they be withdrawn.

Rejection under 35 U.S.C. § 112

The Examiner rejected claims 27-30 under 35 U.S.C. § 112, second paragraph, as being indefinite. Claims 27 and 29 have been amended to indicate that the control valve is made integral with the center section. Claims 28 and 30 have been amended to remove the portion reciting that the control valve is made integrally with the housing. Accordingly, Applicants request that the rejection with respect to 35 U.S.C. § 112, second paragraph, be withdrawn.

Rejections under 35 U.S.C. § 103

The Examiner rejected claims 24-30 under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 3,132,486 to Jonkers *et al.* in view of U.S. Patent No. 3,133,418 to Froebe. The Examiner states that Jonkers discloses an axle driving apparatus that includes a variable displacement hydraulic pump (1), a hydraulic motor (2) and an axle (driving wheels 204, 205 in FIG. 18) disposed in a housing that serves as a fluid sump

(122). The Examiner also states that Jonkers discloses a center section (27) having a closed fluid circuit (63, 64) that connects the pump and motor, and a hydraulic actuator for tilt-operating a swash plate on the hydraulic pump. The Examiner recognizes that Jonkers fails to disclose a center section in the housing or a charge pump in the housing driven together with the hydraulic pump.

The Examiner relies on Froebe for disclosure of a center section in a housing. The Examiner further relies on official notice for the assertion that it is “well known to use a charge pump in a housing of a hydrostatic transmission, driven together with a variable displacement pump, to supply fluid from a sump to an actuator adjusting the displacement of the variable pump.

Jonkers and Froebe both disclose hydraulic transmission systems that include a hydraulic pump and a hydraulic motor that are connected through a fluid circuit. Jonkers specifically discloses a system wherein both the pump and motor are variable displacement and each includes a movable swash plate. The swash plates in Jonkers are interlocked by a toothed rack (107) that meshes with a toothed drum (75) so that the swash plates rotate in a common plane and in an amount proportional to each other. Jonkers col. 1, lines 16-17; col. 1, lines 20-26; col. 5, lines 23-36. The interlocking mechanism varies the transmission ratio between the pump and motor. Jonkers col. 1, lines 16-17; col. 1, lines 20-26; col. 5, lines 23-36. Since the swash plates rotate in a common plane, the pump and motor are configured so that their axes of rotation (65, 66) are coincident. Jonkers col. 3, lines 23-27; Figures 1 and 2.

Froebe discloses a hydraulic transmission wherein an input shaft (16) of the pump (12) extends coaxially through a motor block (22). The motor block (22) is

coaxially secured to a bell housing (18) that is integral with an output shaft (23). As a result, the input shaft (16) of the pump (12) is coaxial with the output shaft (23).

Claim 24, as amended, recites an axle driving apparatus that includes a housing that serves as a fluid sump, a variable displacement hydraulic pump disposed in the housing, a hydraulic actuator for tilt-operating a swash plate of the pump, a center section that is provided with a closed fluid circuit connecting the pump and motor, an axle, and a charge pump. Claim 24 further recites that the hydraulic pump is connected to an input shaft that is supported by the housing and *disposed perpendicular to the axle* and that the charge pump is supported by the housing and connected to the input shaft on a side of the input shaft that is opposite from the hydraulic pump with respect to the center section.

Neither Jonkers nor Froebe disclose an axle driving apparatus that includes an input shaft that is *disposed perpendicular to an axle* where a hydraulic pump and a charge pump are connected to ends of the input shaft and the charge pump is disposed opposite to the hydraulic pump with respect to a center section. In fact, both disclose that the input of the hydraulic pump is coaxial with an output shaft of the motor. There is no indication in either that there is an axle that is perpendicular to the input of the hydraulic pump.

For at least that reason, claim 24 is patentable over Jonkers in view of Froebe. Claims 25-30 are dependent on claim 24 and, for at least the reason discussed above, are also patentable over Jonkers in view of Froebe.

Amendments to the Specification

Paragraphs 0007, 0012, 0022, 0027, 0036, 0047 have been amended to correct minor typographical errors. No new matter has been added by such amendments.

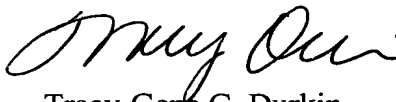
Conclusion

All of the stated grounds of objection and rejection have been properly traversed, accommodated, or rendered moot. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding objections and rejections and that they be withdrawn. Applicants believe that a full and complete reply has been made to the outstanding Office Action and, as such, the present application is in condition for allowance. If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone the undersigned at the number provided.

Prompt and favorable consideration of this Amendment and Reply is respectfully requested.

Respectfully submitted,

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